
Worksheet 11: Impulse and momentum

1. From mass m , net force F , and duration Δt , find acceleration a and velocity change Δv .

m (kg)	F (N)	Δt (s)	a (m/s ²)	Δv (m/s)
1	10	1		
1	10	10		
1	1	10		
10	10	10		

2. What are the units of:

a. impulse?

b. momentum?

3. From mass m , net force F , and duration Δt , find impulse J and momentum change Δp .

m (kg)	F (N)	Δt (s)	J (_____)	Δv (_____)
1	10	1		
1	10	10		
1	1	10		
10	10	10		

4. Show that when a net force \vec{F} is applied to an object of mass m for a time Δt , its change in momentum is $\Delta\vec{p} = \vec{F}\Delta t$.